

### Amendments to the Claims

1. (currently amended) A preparation method for a solid titanium catalyst for olefin polymerization, which comprises the steps of:
  - (1) preparing a magnesium compound solution by dissolving a magnesium halide compound into a mixed solvent of a cyclic ether and one or more of alcohol;
  - (2) preparing a carrier by adding firstly a titanium halide compound having a general formula of  $Ti(OR)_aX_{(4-a)}$ , in which R is an  $[[a]]$  (4-a) alkyl group having 1-10 carbon atoms, X is a halogen atom and a is an integer of 0-3, to the magnesium compound ~~solution at~~ solution at -10-30°C, wherein the molar ratio of the firstly-added titanium halide compound to the mixed solvent of cyclic ether and one or more of alcohol is 1:3.0-1:10, elevating the temperature of the resulted solution or aging it, and then thereto adding secondly the titanium halide compound additionally;
  - (3) preparing a titanium catalyst by reacting the carrier with a titanium compound and an electron donor; and
  - (4) washing the ~~titanium~~ titanium catalyst with hydrocarbon solvent at 40-200°C.
2. (currently amended) The preparation method for a solid titanium catalyst for olefin polymerization according to claim 1, ~~characterized in that~~ wherein the cyclic ether used in the step (1) is tetrahydrofuran or 2-methyltetrahydrofuran, and the one or more of alcohol used in the step (1) is primary or polyhydric alcohol having 2-12 carbon atoms.
3. (currently amended) The preparation method for a solid titanium catalyst for olefin polymerization according to claim 1, ~~characterized in that~~ wherein the molar ratio of the cyclic ether to the one or more of alcohol used in the step (1) is 1:0.1 - 1:10.
4. (cancel)

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5. (currently amended) The preparation method for a solid titanium catalyst for olefin polymerization according to claim 1, ~~characterized in that~~ wherein the washing of the titanium catalyst is repeated 2-10 times with hydrocarbon solvent at 40-200°C in the step (4).

6. (currently amended) The preparation method for a solid titanium catalyst for olefin polymerization according to claim 2, ~~characterized in that~~ wherein the molar ratio of the cyclic ether to the one or more of alcohol used in the step (1) is 1:0.1 - 1:10.